

# **ABSTRACT**

The present invention relates to novel cytoplasmic tyrosine kinases isolated from megakaryocytes (megakaryocyte kinases or MKKs) which are involved in cellular signal transduction pathways and to the use of these novel proteins in the diagnosis and treatment of disease.

The present invention further relates to specific megakaryocyte kinases, designated MKK1, MKK2 and MKK3, and their use as diagnostic and therapeutic agents.